In the Claims

1. (Withdrawn) Method for depositing crystalline layers on substrates lying on rotationally driven substrate holders in a process chamber, the substrate holders being disposed around the center of a rotationally driven substrate holder carrier, which substrate holders together with the substrate holder carrier form a process chamber base, opposite which there is a process chamber cover with a central gas inlet element, through which one or more gaseous starting materials are introduced together with a carrier gas into a decomposition zone which is disposed above a heated central region of the process chamber base and is surrounded by a diffusion zone, from which the decomposition products transported in the radially outwardly flowing carrier gas stream reach the substrate, characterized in that the central region of the process chamber base is rotationally driven in relation to the substrate holder carrier and the process chamber cover or the gas inlet element.

2. (currently amended) Apparatus for depositing crystalline layers on crystalline substrates resting on rotationally drivable substrate holders in a process chamber of the apparatus, the substrate holders being disposed around the rotational center of a rotationally drivable substrate holder carrier, which substrate holders together with the substrate holder carrier form a process chamber base, opposite which there is a process chamber cover with a central gas inlet element, a central region of the process chamber base giving off heat to one or more gaseous starting materials introduced into the process chamber through the gas inlet element as a result of heating, characterized in that the central region of the process chamber base is rotationally drivable in relation to the substrate holder carrier and the process chamber cover or the gas inlet element.

3. (withdrawn) Method according to Claim 1, characterized in that the substrate holders and a center plate, which with its surface forms the central region, are rotationally mounted on a gas cushion.

4. (withdrawn) Method according to Claim 3, characterized in that a thermal conductivity of the gas cushion carrying and rotationally driving the center plate can be set by choosing the gas mixture, the gas mixture comprising a gas with a high thermal conductivity and a gas with a low thermal conductivity.

5. (withdrawn) Method according to Claim 3, characterized in that the center plate consists of graphite, an inert metal, ceramic or quartz.

6. (withdrawn) Method according to Claim 3, characterized in that the center plate rotates in the same direction as or in the opposite direction to the substrate holder carrier.

7. (withdrawn) Method according to Claim 3, characterized in that the center plate is carried by substrate holder carrier.

8. (withdrawn) Method according to Claim 3, characterized in that the substrate holder carrier comprises more than one part and is held centrally by two clamping plates, the center plate lying above an uppermost of the two clamping plates.

9. (withdrawn) Method according to Claim 3, characterized by a coaxial supply line of the gas streams forming the gas cushions.

10. (withdrawn) Method according to Claim 3, characterized in that the center plate is rotationally driven mechanically by means of a drive shaft or by means of drive wheels.

11. (previously presented) Apparatus according to Claim 2, characterized in that the substrate holders and a center plate, which with its surface forms the central region, are rotationally mounted on a gas cushion.

12. (previously presented) Apparatus according to Claim 11, characterized in that a thermal conductivity of the gas cushion carrying and rotationally driving the center plate can be set by choosing the gas mixture, the gas mixture comprising a gas with a high thermal conductivity and a gas with a low thermal conductivity.

13. (previously presented) Apparatus according to Claim 11, characterized in that the center plate consists of graphite, an inert metal, ceramic or quartz.

14. (previously presented) Apparatus according to Claim 11, characterized in that the center plate rotates in the same direction as or in the opposite direction to the substrate holder carrier.

15. (previously presented) Apparatus according to Claim 11, characterized in that the center plate is carried by substrate holder carrier.

16. (previously presented) Apparatus according to Claim 11, characterized in that the substrate holder carrier comprises more than one part and is held centrally by two clamping plates, the center plate lying above an uppermost of the two clamping plates.

17. (previously presented) Apparatus according to Claim 11, characterized by a coaxial supply line of the gas streams forming the gas cushions.

18. (previously presented) Apparatus according to Claim 11, characterized in that the center plate is rotationally driven mechanically by means of a drive shaft or by means of drive wheels.